Jeroen Van Schependom

Curriculum Vitae

Personalia

Nationality Belgian

Orcid ID 0000-0003-1200-5872

Experience

2020-Present **Vice Chair AI Supported Modelling in Clinical Sciences (AIMS)**, *VUB*.

2019-Present **Senior Research Fellow (Docent)**, *Vrije Universiteit Brussel*.

2018-Present **Secretary**, *Scientific steering group National MS Centre Melsbroek*.

2019-2019 **Visiting Researcher**, *Computational Neuroscience Group*, UPF Barcelona.

2016-2019 **Assistant Professor**, *Vrije Universiteit Brussel*, Radiology, 10 % .

2016-2019 **FWO Post-Doc**, *Vrije Universiteit Brussel*, Center for Neurosciences, 90 % .

2016-2019 **Honorary Physicist**, *Vrije Universiteit Brussel*, Radiology.

2016-2017 **Visiting Researcher**, *University of Oxford*, Oxford Centre for Human Brain Activity.

2014-2016 **Internship**, *IcoMetrix NV*, R&D.

2012–2016 **FWO Aspirant (PhD candidate)**, *Vrije Universiteit Brussel - UMons*, Center for Neurosciences–Faculté de Psychologie et des sciences de l'Education.

2011–2012 **PhD candidate**, *UMons*, Faculté de Psychologie et des sciences de l'Education.

PhD Thesis

Joint PhD - Vrije Universiteit Brussel - Université de Mons

Title **Cognitive Impairment in MS: Statistical and Neurophysiological aspects**

Supervisors Prof. Dr. Marie-Claire Haelewyck, Prof. Dr. Marie B D'hooghe, Prof. Dr. Jacques De Keyser & Prof. Dr. ir. Guy Nagels

Description This thesis assessed the evolution of cognitive impairment in MS and explored the possibility of using EEG as a biomarker for this cognitive decline using advanced classification schemes.

Defended on 5 May 2015

Supervision

PhDs **Supervisor**, *Faculty of Engineering*, On-going/Starting.

- Chiara Rossi, FWO Aspirant mandate, Start date: 1-nov-2019
- To be determined, FWO Project on the development of novel neuromodulation paradigms to enhance remyelination. Start-date: 1-Oct-2021

PhDs **Supervisor**, *Faculty of Medicine and Pharmaceutical sciences*, On-going/Starting.

- To be determined, FWO Project on the development of novel neuromodulation paradigms to enhance remyelination. Start-date: 1-Oct-2021

Co-supervisor, *Faculty of Medicine and Pharmaceutical Sciences*, On-going.

- Lars Costers, Master of Sciences in Psychology (UGent) works as FWO-aspirant on the advanced analysis of working memory in healthy controls and people with multiple sclerosis. Public PhD Defense scheduled: 13-April-2020.
- Johan Baijot, Master of Sciences in Biomedical Engineering (VUB) works on the graph-theoretical analysis of resting-state fMRI data and their link with cognitive functioning in healthy controls and people with MS. Start date: 1-Oct-2017;
- Stijn Denissen, Master of Sciences in Physical Therapy (KULeuven) works on the application of deep learning methods to predict cognitive impairment in MS. Start date: 1-Mar-2019;

Co-supervisor, *Faculty of Medicine and Pharmaceutical Sciences*, Defended.

- Jorne Laton, Machine learning techniques to improve the value of neurophysiological measurements for individual patients, 2017, Vrije Universiteit Brussel
- Jeroen Gielen, MRI measures in the assessment of cognitive function in MS, 2018, Vrije Universiteit Brussel.

Master theses **Supervisor**, *Faculty of Engineering*.

- Wenhai Liu, Cross-subject analysis of diffusion tensor imaging ? Processing large datasets using GPU based algorithms.
- Chiara Rossi, Assessing the intracerebral conduction velocity in vivo. A comparison MS vs HC.

Co-Supervisor, *Faculty of Medicine and Pharmaceutical Sciences*.

- Yacine Boudiba; Frequenty analysis of resting-state EEG in multiple sclerosis patients.
- Marvin Heinrich; The effect of Fampyra on the intracerebral conduction velocity in relapsing-remitting MS patients.
- Liv Jacobs; The effect of Fampyra on neurophysiological processing power in different frequency bands.

Education

2020 **FELASA - Cat C**, *UGent*.

2019 **Certificate of Good Clinical Practice**, *UZ Leuven*.

2011–2015 **Joint PhD**.

- Medical Sciences, VUB, Brussels
- Psychological Sciences, UMONS, Mons

2009–2011 **Master of Science in Engineering Physics**, *UGent*, Ghent.
Highest distinction

2006–2009 **Bachelor of Science in Engineering Physics**, *UGent*, Ghent.
High distinction

2001–2006 **Greek-Mathematics**, *Sint-Jozef-Klein-Seminarie*, Sint-Niklaas.
Highest distinction

2011-2015 **Workshops**.

- 2015 - MEG workshop - Oxford Centre for Human Brain Activity (OHBA)
- 2012 - EEGlab workshop - Tsingua University - Beijing
- 2012 - SPM8 workshop - University College London

2011-2015 **PhD Training**, *Vrije Universiteit Brussel/UMons*.
Project planning, Presentation Skills

2011-2015 **Extra Courses**.

- Datamining and machine learning (KULeuven, prof. J Suykens)
- Least-Squares Support Vector Machines (KULeuven, prof. J Suykens)
- Statistical Foundations of Machine Learning (VUB/ULB, prof. G. Bontempi)
- Coursera.org: Statistical analysis of fMRI data (Prof. Martin Lyndquist), Machine Learning (Prof. Andrew Ng), Computing for Data Analysis (Prof. Roger Peng), Computational Neuroscience (Prof. Rajesh Rao)

2010-2011 **Extra Courses**, *UGent*, Ghent.
Group Theory, NMR

2010-2010 **7th International Esarda course: Nuclear safeguards and non-proliferation**, *Joint Research Center Ispra*, Italy.

2009-2010 **Erasmus**, *Universidad Complutense de Madrid*, Madrid.

Awards/Grants

Personal **2019** - **Marie Curie Individual Fellowship** - Seal of Excellence

2018 - **Belgian Neurological Society** - Research Prize 2018

2017 - **Flanders Research Foundation** - Krediet aan Navorser (38.300 EUR)

2016 - **Flanders Research Foundation** - Postdoc: How brain structure influences brain functioning, a mechanistic model to improve our understanding of cognitive impairment in Multiple Sclerosis

2011 - **Flanders Research Foundation** - Research scholarship (FWO-Aspirant): On the neurophysiology of cognitive deterioration in Multiple Sclerosis

Promoter **2020** - **Flanders Research Foundation**: *FWO-Project (G042821N) - Prolonged transcranial alternating current stimulation leveraging new stimulation paradigms and set-ups as a treatment to promote remyelination in cuprizone treated mice (492.250 EUR)*

2020 - **VUB**: *IOF PoC: aSOMI - a State of Minds Interface (68.151 EUR)*

2020 - **Flanders Research Foundation**: *FWO-aspirant mandate - Chiara Rossi (11K2821N) - Unravelling cognitive functioning in healthy and multiple sclerosis through the analysis of transiently bursting brain networks at milliseconds time scale*

2019 - **Belgian Charcot Foundation**: *Application of transcranial Alternating Current Stimulation to enhance remyelination (39.000 EUR)*

Co-promoter **2020** - **Innoviris** - Joint R&D - Data governance in the development of machine learning algorithms to predict neurodegenerative disease evolution

2019 - VLAIO - Creating the MS compass of the future: imaging AI to predict disease progression. Stijn Denissen

2017 - Flanders Research Foundation - Research scholarship (FWO-Aspirant): Lars Costers

2014 - Belgian Charcot Foundation: *Graph-theoretical analysis of magnetoencephalographic recordings as biomarker for cognitive deterioration in Multiple Sclerosis (37.000 EUR)*

2014 - Genzyme-Sanofi: *Graph-theoretical analysis of magnetoencephalographic recordings as biomarker for cognitive deterioration in Multiple Sclerosis (430.000 EUR)*

Travel Grants **Flanders Research Foundation** - Six month research at University of Oxford - Six month research stay at Universitat Pompeu Fabra - European Science Open Forum

ECTRIMS - Based on paper merit

Computer skills

Matlab, R, Python, Linux, SPM, EEGLab, PsychToolbox

Communication Skills

2016 **Invited Talk:** "Brain atrophy in Multiple Sclerosis" - 12^{th} Workshop of the International School of Magnetic Resonance and Brain Function, Erice, Sicily

2016 **Invited Talk:** "From neuronal firing to whole-brain cortical networks - Application to MS" - 12^{th} Workshop of the International School of Magnetic Resonance and Brain Function, Erice, Sicily

2013 **Oral Presentation** at the 2nd International Conference of the MS Cognition Society (IMSCOGS), Zürich, Switzerland

2011–Present Many oral presentations in an informal setting to a variety of audiences

2011–Present Posters at several conferences (Engineering, Psychology, Medical)

Teaching

2019–2020 **Erasmus Mundus programme**, *Neurasmus*, Charité-Universitätsmedizin.
- Neurophysiological signal processing

2015–Present **Faculty of Medicine and Pharmaceutical Sciences (VUB)**.
- Cellular Neurophysiology. Partim. Chemical and electrical communication
- New therapeutic approaches to disorders of the central nervous system
- Medical information and communication systems
- Capita selecta voor de ziekenhuisarts, inclusief praktische oefeningen (co-titularis) - 3u HOC - ManaMa in de Specialistische Geneeskunde.

2015–Present **Faculty of Engineering - Master Biomedical engineering (VUB-UGent)**.
- Modeling of physiological systems
- Measurements and analysis of biomedical signals
- Neurophysiological signal processing and graph network analysis
- Computational Neurophysiology

Languages

Mother tongue **Dutch**

Fluent **English,French**

Basic **German, Spanish** *Level: B1, B2*

Interests

Piano, Volleyball, Running

Papers

Since 2014 I have published 24 papers (all Q1) and 2 IEEE conference proceedings. I have published 11 papers as main author and have received 385 citations (98 of which in 2020) yielding an h-index of 10 according to Google Scholar. According to web of science, I have received 233 citations (65 of which in 2020), yielding an h-index of 8. In the list below, I have listed two papers that are currently under review.

2021 Van Schependom J, Vidaurre D, Costers L, Sjogard M, Sima D, Smeets D, D'hooghe MB, D'haeseleer M, Deco G, Wens V, De Tiège X, Goldman S, Woolrich M; Nagels G; **Increased brain atrophy and lesion load is associated with stronger lower alpha MEG power in multiple sclerosis patients**, *Accepted (NeuroImage Clinical)*

2021 Baijot J, Denissen S, Costers L, Gielen J, Cambron M, D'haeseleer M, D'hooghe MB, Vanbinst AM, De Mey J, Nagels G, Van Schependom J **Signal quality as Achilles' heel of graph theoy in functional magnetic resonanc imaging in multiple sclerosis**, *Accepted. Scientific Reports*

2021 Van Laethem D, De Cock A, Van Schependom J, Benedict RHB, Nagels G, D'hooghe MB **The value of self-reported cognitive performance in low, medium and high EDSS**, *Under review*

2021 Sjogard M; Wens V; Van Schependom J; Costers L; D'hooghe MB; D'haeseleer M; Woolrich M; Goldman S; Nagels G; Detiege X **Brain dysconnectivity relates to disability and cognitive impairment in multiple sclerosis**, *Human Brain Mapping*, 2021 Feb 15; 42(3):626-643, IF:4.9 [Q1]

2020 Costers L; Van Schependom J; Baijot J; Sjogard M; Wens V; Detiege X; Goldman S; D'haeseleer M; D'hooghe MB; Woolrich M; Nagels G; **The role of hippocampal theta oscillations in working memory impairment in multiple sclerosis**, *Human Brain Mapping*, 2020 Nov 28, IF:4.9 [Q1]

2020 D'haeseleer M; Eelen P; Sadeghi N; D'hooghe MB; Van Schependom J; Nagels G **Feasibility of real-time internet-based teleconsultation in patients with multiple sclerosis: a pilot study**, *Journal of Medical internet research*, 22(8), e18178, IF:5.1 [Q1], # Citations: 6

2020 Costers L; Van Schependom J; Laton J; Baijot J; Sjogard M; Wens V; Detiège X; Goldman S; D'haeseleer M; D'hooghe MB; Woolrich M; Nagels G **Spatiotemporal and spectral dynamics of multi-item working memory as revealed by the n-back task using MEG**, *Human Brain Mapping*, 41(9), 2431-2446, IF:4.9 [Q1], # Citations: 3

2019 Van Schependom J; Guldof K; Nagels G; D'haeseleer M **Detecting neurodegenerative pathology in multiple sclerosis before irreverisble brain tissue loss sets in**, *Translational Neurodegeneration*, 8 (37), IF:5.9 [Q1]; # Citations: 7

2019 Denissen S; De Cock A; Meurrens T, Vleugels L; Van Remoortel A; Gebara B; D'haeseleer M, D'hooghe MB; Van Schependom J, Nagels G; **The impact of cognitive dysfunction on locomotor rehabilitation potential in multiple sclerosis** , *Journal of Central Nervous System Disease*, Nov 6; 11:1179573519884041, IF:4.3 [Q1]

2019 Van Schependom J, Vidaurre, D; Costers L; Sjogard, M; D'hooghe, MB; D'haeseleer M; Wens, V; De Tiège, X; Goldman, S; Woolrich M; Nagels G; **Altered transient brain dynamics in multiple sclerosis: treatment or pathology?** , *Human Brain Mapping*, Nov 1; 40(16): 4789-4800, IF:4.9 [Q1], # Citations: 5

2019 Sjogard M; De Tiège X; Mary A; Peigneux P; Goldman S; Nagels G; Van Schependom J; Quinn AJ; Woolrich MW, Wens V **Do the posterior midline cortices belong to the electrophysiological default-mode network?** , *Neuroimage*, 2019 Jun 22; 200:221-230 IF:5.4 [Q1], # Citations: 10

2018 Van Schependom J, Niemantsverdriet E, Smeets D, Engelborghs S; **Callosal circularity as an early marker for Alzheimer's disease** , *NeuroImage-Clinical*, 19 516-526, IF:4.4 [Q1], # Citations: 3

2018 Gielen J, Wiels W, Van Schependom J, Laton J, Van Hecke W, Parizel P, D'hooghe MB, Nagels G **The effect of task modality and stimulus frequency in paced serial addition tests on functional brain activity**, *PLOS-One*, 13(3), e0914388, IF: 2.8 [Q1], # Citations: 3

2017 Van Schependom J, Nagels G; **Targeting cognitive impairment in MS - the road towards an imaging-based biomarker**, *Frontiers in Neuroscience - Brain Imaging Methods*, Oct, IF: 3.7 [Q1], # Citations: 7

2017 Van Schependom J, Gielen J, Laton J, Sotiropoulos G, Vanbinst AM, De Mey J, Smeets D, Nagels G; **The effect of morphological and microstructural integrity of the corpus callosum on cognition, fatigue and depression in mildly disabled MS patients**, *Magnetic Resonance Imaging*, Oct, IF: 2.2 [Q1], # Citations: 9

2017 Costers L, Gielen J, Eelen P, Van Schependom J, Laton J, Van Remoortel A, Vanzeir E, Van Wijmeersch B, Seeldrayers P, Haelewyck MC, D'Haeseleer M, D'hooghe MB, Langdon D, Nagels G; **Does including the full CVLT-II and BVMT-R improve BICAMS? Evidence from a Belgian (Dutch) validation study**, *Multiple Sclerosis and related disorders*, 18:33-40, IF:2.5 [Q1], # Citations: 14

2017 Goossens J, Laton J, Van Schependom J, Gielen J, Struyfs H, Van Mossevelde S, Van den Bossche T, Goeman J, De Deyn PP, Sieben A, Martin JJ, Van Broeckhoven C, van der Zee J, Engelborghs S, Nagels G; **EEG dominant peak frequency differentiates between Alzheimer's disease and frontotemporal lobal degeneration**, *Journal of Alzheimer's Disease*, 55(1):53-80, IF:3.8, # Citations: 2

2016 Van Schependom J, Jain S, Cambron M, Vanbinst AM, De Mey J, Smeets D, Nagels G; **Reliability of measuring regional callosal atrophy in neurodegenerative diseases**, *NeuroImage: Clinical*, Oct, IF: 4.3 [Q1], # Citations: 9

2015 Van Schependom J, Weiping Y, Gielen J, Laton J, De Keyser J, De Hert M, Nagels G; **Do advanced statistical techniques really help in the diagnosis of the Metabolic Syndrome in patients treated with anti-psychotics?**, *Journal of Clinical Psychiatry*, Oct, IF: 5.5 [Q1], # Citations: 7

2015 Van Schependom J, Gielen J, Laton J, Nagels G; **Assessing PML risk under immunotherapy: if all you have is a hammer, everything looks like a nail.**, *Multiple Sclerosis Journal*, Jul 21, IF: 4.5, 23/194 [Q1], # Citations: 15

2014 Van Schependom J, D'hooghe MB, Cleynhens K, D'hooge M, Haelewyck MC, De Keyser J, Nagels G; **Reduced information processing speed as primum movens for cognitive decline in Multiple Sclerosis**, *Multiple Sclerosis Journal*, Jan 21(1): 83-91, IF: 4.5, 23/194 [Q1], # Citations: 54

2014 Van Schependom J, D'hooghe MB, Cleynhens K, D'hooge M, Haelewyck MC, De Keyser J, Nagels G; **The Symbol Digit Modalities Test as sentinel test for cognitive impairment in MS**, *European Journal of Neurology*, Sep 21(9), pp 1219-1225, IF: 4.2, 36/149 [Q1], # Citations: 109

2014 Van Schependom J, Gielen J, Laton J, D'hooghe MB, De Keyser J, Nagels G; **Graph theoretical analysis indicates cognitive impairment in MS stems from neural disconnection**, *NeuroImage:Clinical*, 4, pp 403-410, IF: 2.5 [Q1], # Citations: 31

2014 Van Schependom J, D'hooghe MB, De Schepper M, Cleynhens K, D'hooge M, Haelewyck MC, De Keyser J, Nagels G; **Relative contribution of cognitive and physical disability components to quality of life in MS**, *Journal of the neurological sciences*, 336(1-2), IF: 2.8, 94/194 [Q1], # Citations: 10

2014 Laton J, Van Schependom J, Gielen J, Decoster J, Moons T, De Keyser J, De Hert M, Nagels G; **Single-subject classification of schizophrenia patients based on a combination of oddball and mismatch evoked potential paradigms**, *Journal of the Neurological Sciences*, Dec 347(1-2):262-7, IF:2.24, # Citations: 16

2014 Gielen J, Laton J, Van Schependom J,De Deyn PP, Nagels G; **The Squares test as a measure of hand function in Multiple Sclerosis**, *Clinical Neurology and Neurosurgery*, Aug, 123:55-60, IF:1.4, # Citations: 5

Preprints

Laton J; Van Schependom J; Decoster J, Moons T, De Hert M, Nagels G; De Vos M**Reduced interhemispheric and increased intrahemispheric connectivity in schizophrenia brain networks**, *https://doi.org/10.1101/755173*

Laton J; Van Schependom J; Goossens J, Wiels W, Sieben A, De Deyn PP, Goeman J, Streffer J, van der Zee J, Martin JJ, Van Broeckhoven C, De Vos M, Bjerke M, Nagels G; Engelborghs S, **Improved Alzheimer's disease versus frontotemporal lobar degeneration differential diagnosis combining EEG and neurochemical markers**, *https://doi.org/10.1101/19009316*

Sjogard M, Bourguignon M, Costers L, Dumitrescu A, Coolen T, Roshchupkina L, Destoky F, Bertels J, Niesen M, Vander Ghinst M, Van Schependom J, Nagels G, Urbain C, Peigneux P, Goldman S, Woolrich M, De Tiege X, Wens V, **Intrinsic/extrinsic duality of large-scale neural functional integration in the human brain**, *https://doi.org/10.1101/2020.04.21.053579*

Peer-reviewed conference proceedings

2014 Van Schependom J, Gielen J, Laton J, D'hooghe MB, De Keyser J, Nagels G; SVM aided detection of cognitive impairment in MS, *IEEE Conference Proceedings - 4th International Workshop on Pattern Recognition in NeuroImaging (PRNI)*,Tübingen

2013 Van Schependom J, D'hooghe MB, De Keyser J, Nagels G; Detection of Cognitive Impairment in MS based on an EEG P300 paradigm, *IEEE Conference Proceedings - 3rd International Workshop on Pattern Recognition in NeuroImaging (PRNI)*, Philadelphia, PA.

Reviewing duties

2012-Present I have served as a reviewer for *Brain*, *Journal of Clinical Medicine Clinical Neurology and Neurosurgery*, *Neurotherapeutics*, *NeuroImage*, *NeuroImage: Clinical*, *Multiple Sclerosis Journal*, *Brain and Behaviour*, *International Journal of Molecular Sciences*, *PLOS ONE*, *European Journal of Neurology*, *International Journal of Medical Informatics*, *Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy, Archives of clinical neuropsychology*, *Journal of Medical Imaging and Health Informatics*, *Journal of the Neurological Sciences* and the *Italian Ministry of Education, University and Research*.

Outreach

2020- For an overview, see `https://aims.research.vub.be/en/blog` and `https://aims.research.vub.be/nl/blog`

2018 EOS-blog: De elementaire deeltjes van ons denken (2018-01-10), `https://www.eoswetenschap.eu/psyche-brein/de-elementaire-deeltjes-van-ons-denken`

2016 MS-symposium. Wat is het nut van beeldvorming van de hersenen in MS?

2016 International MS organisation (IMSO) - Jaargang 37, Nr. 3; Het opvolgen en opmeten van cognitieve achteruitgang tgv Multiple Sclerose - Een multidisciplinaire aanpak.

2014 Interview by EOS (Belgian popularising science journal).

2014 Interview by CM (A Belgian Health Insurance Company).

Poster Presentations

Incomplete list:

2018 Van Schependom J, Vidaurre D, D'haeseleer M, Wens V, De Tiège X, Goldman S, Woolrich M and Nagels G. ; Altered transient state dynamics in multiple sclerosis. ; *Human Brain Mapping*, Singapore

2016 Van Schependom J, Sotiropoulos G, Smeets D, Nagels G; Automated Corpus Callosum Segmentation and feature extraction in neurodegenerative diseases. ; *Human Brain Mapping*, Geneva, Switzerland

2015 Van Schependom J, Sotiropoulos G, Smeets D, Nagels G; Automated Corpus Callosum segmentation applying Active Shape Models to the OASIS database; *Human Brain Mapping*, Honolulu, HI

2015 Gielen J, Cambron M, Smetcoren S, Van Schependom J, Laton J, De Mey J, Vanbinst AM, D'haeseleer M, De Keyser J, D'hooghe MB, Nagels G; Cognitive function in MS correlates with resting state fMRI networks; *Human Brain Mapping*,Honolulu, HI

2014 Van Schependom J, Gielen J, Laton J, D'hooghe MB, De Keyser J, Nagels G; Detecting cognitive impairment in MS based on a support vector machine classification of EEG P300 connectivity, *ACTRIMS-ECTRIMS*, Boston, MA

2014 Van Schependom J, Gielen J, Laton J, D'hooghe MB, De Keyser J, Nagels G; Graph theoretical analysis indicates cognitive impairment in MS stems from neural disconnection, *Human Brain Mapping*, Hamburg, Germany

2014 Van Schependom J, Gielen J, Laton J, D'hooghe MB, De Keyser J, Nagels G; Weighted time-varying network differences between cognitively intact and impaired MS patients using correlation as connectivity measure, *International Conference on Clinical Neurophysiology*, Berlin, Germany

2013 Van Schependom J, Gielen J, Laton J, D'hooghe MB, De Keyser J, Nagels G; Source level analysis of oddball evoked potentials correlates with cognitive deterioration in MS, *Human Brain Mapping*, Seattle, WA

2013 Van Schependom J, Weiping Y, Gielen J, Laton J, De Hert M, Nagels G; Use of Artificial Neural Networks in the diagnosis of the metabolic syndrome in schizophrenia patients, *14th International Congress on Schizophrenia Research*,Orlando, Fl

2012 Van Schependom J, Gielen J, Laton J, D'hooghe MB, De Keyser J, Nagels G; Revealing new features of eegdata for the detection of cognitive impairment in MS. *11th Belgian Day on Biomedical Engineering*, Brussels

2012 Van Schependom J, D'hooghe MB, De Schepper M, Cleynhens K, D'hooge M, Haelewyck MC, De Keyser J, Nagels G; Survival analysis of the NSBMS supports SDMT as a sentinel test for cognitive deterioration in MS,*28th Congress of the European Committee for treatment and research in MS (ECTRIMS)*,Lyon

2012 Van Schependom J, D'hooghe MB, De Schepper M, Cleynhens K, D'hooge M, Haelewyck MC, Nagels G; Relative contribution of cognitive and physical disability components to quality of life in MS,*1st International Multiple Sclerosis Cognition Society Congress (IMSCOGS)*, Bordeaux